

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000054997	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/011641	International filing date (<i>day/month/year</i>) 15.10.2004	Priority date (<i>day/month/year</i>) 23.10.2003	
International Patent Classification (IPC) or national classification and IPC C23C22/53, C23C22/56, C23C22/08, C09D5/08, B05D7/14, C23C22/78, C23C22/83			
Applicant BASF Aktiengesellschaft			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 4 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/011641

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

 - international search (Rule 12.3 and 23.1(b))
 - publication of the international application (Rule 12.4)
 - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:
 pages 1-28 _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____
 the claims:
 nos. _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 1-24 received by this Authority on 18.06.2005 with letter of 16.06.2005
 nos.* _____ received by this Authority on _____
 the drawings:
 sheets _____ as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____
 a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/011641

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1–24	YES
	Claims	_____	NO
Inventive step (IS)	Claims	1–24	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	1–24	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

- 1) The present report refers to the following document:

D1: DE 199 23 084 A (HENKEL KGAA) 23 November 2000
(2000-11-23)

1.1) The application defines a method for the passivation of zinc or aluminium surfaces (claim 1), a passivation layer (claim 18), a surface provided with the passivation layer (claim 20), a zinc-coated passivated steel strip (claim 22) and a preparation for the passivation of zinc or aluminium surfaces (claim 23).

2) D1, which is considered the closest prior art, discloses (see page 4, lines 11–39 and claims) a passivation method for, *inter alia*, galvanised steel. The passivation solution is an acidic aqueous solution containing phosphoric acid, hexafluoro anions and a water-soluble or water-dispersible film-forming organic polymer. The polymer can be a polymer of (meth)acrylic acid and can be cross-linked with an epoxide resin (cross-

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	linking agent with oxirane groups).

The subject matter of claims 1-24 is novel over the disclosure of D1 because a cross-linking agent with a specific molecular weight and water solubility and a copolymer with a specific content of (meth) acrylic acids have to be used. The subject matter of these claims is a new selection from the teaching of D1 (PCT Article 33(2)).

The problem addressed by the invention is to propose passivation with a polymer based on (meth)acrylic acid units that offers very good corrosion protection.

The examples and comparative examples show that in particular the use of cross-linking agents with good water solubility of at least 10 g/l contribute to the solving of this problem. This selection is not suggested by the prior art, where in contrast comparatively poorly water-soluble cross-linking agents are proposed.

The subject matter of claims 1-24 is therefore deemed inventive (PCT Article 33(3)).